

**Designation of Sensitive Areas
Mason Lake, Adams County**

**Wisconsin Department of Natural Resources
Eau Claire, WI**

Sensitive Area Designation

Mason Lake, Adams County

I. INTRODUCTION

Designation of sensitive areas within lakes provide a holistic approach to the protection of those sites within a lake that are most important for preserving the very character and qualities of the lake that initially attracted developments on the lake. These sites are those sensitive and fragile areas that support the wildlife and fish habitat, provide the mechanisms that protect the water quality in the lake, harbor quality plant communities and preserve the places of serenity and aesthetic beauty for the enjoyment of lake residents and visitors. The sensitive area designation will provide a framework for management decisions that impact the ecosystem of the lake.

A Sensitive Area Study was conducted September 29, 2003 on Mason Lake, Adams County.

The study team included:

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Mason Lake is a 855-acre lake with a maximum depth of 9 ft.

II. THE SENSITIVE AREAS

The reasons for selection of each sensitive area varied among the sites; all sites were selected because of their importance for fish habitat. All of the sensitive areas that were selected have the potential to be used for educational purposes (Figure 1).

Sensitive Area ML1 – Burn's Cove

This sensitive area extends along approximately 4000 feet of shoreline in the cove and up the stream, averaging 3 feet in depth and supports important near-shore terrestrial habitat, shoreline habitat and shallow water habitat (Figure 1). The sediment is sand, silt, rock and peat.

The area provides visual and sound buffers and a unique area of outstanding beauty for lake residents and visitors.

Additional reasons for site selection:

- 1) its importance for maintaining water quality;
- 2) its natural scenic beauty
- 3) the diverse aquatic plant community
- 4) the terrestrial vegetation community.
- 5) The site provides a visual and audible barrier from structures, roads and boat traffic.

The shoreline is 30% agricultural, 50% wooded. Fallen woody material is common in the shallow zone for habitat.

The Plant Community:

Sedges, marsh milkweed, bulrush, reed canary grass, willow, dogwood, birch, cottonwood and other trees colonize the shoreline.

Bulrush, bur-reed, reed-canary grass and cattails emerge from the shallow water.

Duckweeds and watermeal float on the surface.

Coontail, common waterweed, water buttercup, bushy pondweed, water star-grass, northern watermilfoil, small pondweed and sago pondweed colonize the underwater habitat up to a depth of 8.5 feet.

Exotic eurasian watermilfoil and curly-leaf pondweed are present

Muskgrass and filamentous algae are present.

Water Quality

Maintaining the integrity of this sensitive area is important for protecting the water quality of Mason Lake.

- 1) The submerged and floating-leaf vegetation in this area ties up nutrients in their tissues that would otherwise be available for algae growth.
- 2) The wetlands are filtering water that enters the lake and preventing shoreline erosion.
- 3) The submergent vegetation is protecting the lake bottom from resuspension of the sediments by boat traffic and wind action, thus maintaining clarity.
- 4) The site is stream inlet, providing water for Mason Lake
- 5) The variety of plant species provides more micro-habitats that increase diversity.

Fish Habitat

The fallen woody cover along the shore and the mosaic of emergent, submergent and floating-leaf vegetation provides a diversity of habitat and feeding opportunities for the fish community.

This area provides

- 1) Spring spawning sites, spring through fall nursery areas, feeding and cover for northern pike, large-mouth bass, bluegill, pumpkinseed, crappie, bullhead, and yellow perch;
- 2) spring through fall nursery areas, feeding sites and cover for suckers;
- 3) carp and rusty crayfish are present.

Recommendations

- 1) Maintain the aquatic vegetation in an undisturbed condition for wildlife habitat, fish cover and as a nutrient buffer for water quality protection.
- 2) Protect the emergent vegetation as habitat and erosion buffer.
- 3) Do not remove fallen trees along shoreline.
- 4) Maintain shoreline vegetation, shrubs and snag trees to provide wildlife habitat, prevent erosion and protect water quality.
- 5) Limit removal of native aquatic vegetation
- 6) Selectively manage for control of curly-leaf pondweed and Eurasian water milfoil
- 7) Recommend slow-no-wake zone in the cove.
- 8) No alteration of the littoral zone except for improvement of spawning habitat
- 9) Minimize removal of any shoreline or aquatic vegetation.
- 10) Seasonal protection of spawning habitat
- 11) Create a fish refuge area
- 12) No permit approval for pea gravel beds, sand blankets or dredging, except for DNR fishery or wildlife approved projects
- 13) Prohibit drain or filling of wetland
- 14) No bank stabilization needed
- 15) No permitting for bank grading
- 16) No permitting for retaining wall
- 17) limit pier placement, use a common access point
- 18) No boat ramp placement
- 19) Limit by permit recreational floating devices

Sensitive Area ML2

The sediment is sand and silt.

2a Northwest Shore

This sensitive area extends along 800 feet of shoreline and supports near-shore terrestrial habitat (Figure 1). The shoreline is wooded and shrub growth sandwiched between cottage development.

Additional reasons for site selection:

The value of the large woody debris for fish habitat that is abundant in the shallow zone.

The Plant Community:

Duckweeds and watermeal float on the surface.

Common waterweed, water buttercup, bushy pondweed, northern watermilfoil and sago pondweed colonize the underwater habitat up to a depth of 6.5 feet.

Exotic Eurasian watermilfoil and curly-leaf pondweed are present

Filamentous algae is present.

Fish Habitat

The fallen woody cover along the shore and submergent vegetation provides a diversity of habitat and feeding opportunities for the fish community.

This area provides

- 1) Spring spawning sites, spring through fall nursery areas, feeding and cover for northern pike, large-mouth bass, bluegill, pumpkinseed, crappie, bullhead, and yellow perch;
- 2) spring through fall nursery areas, feeding sites and cover for suckers;
- 3) carp and rusty crayfish are present.

2b – Big Spring Inlet

This sensitive area extends for 800 feet along the lake shore at the mouth and up the Big Spring tributary, averaging 2 feet in depth and supports important near-shore terrestrial habitat, shoreline habitat and shallow water habitat (Figure 1). The shoreline is entirely wooded with small areas of shrub and herbaceous plant growth. The wetlands contain emergent herbaceous wetlands and shallow open water wetlands. Fallen woody material is present in the shallow zone for habitat

The area provides visual and sound buffers and a unique area of outstanding beauty for lake residents and visitors.

Additional reasons for site selection:

- 1) natural scenic beauty
- 2) the diversity of the aquatic plant community
- 3) the terrestrial plant community.

The Plant Community:

Trees, shrubs, sedges and reed-canary grass colonize the shoreline.
Sedges, bur-reed and cattails emerge from the shallow water.
Yellow pond lilies duckweeds and watermeal float on the surface.
Coontail, common waterweed, water buttercup, water star-grass, sago pondweed, small pondweed, Vasey's pondweed and long-leaf pondweed colonize the underwater habitat up to a depth of 3 feet.
Exotic Eurasian watermilfoil and curly-leaf pondweed are present
Filamentous algae is present.

Water Quality

Maintaining the integrity of this sensitive area is important for protecting the water quality of Mason Lake. The site is a stream inlet water source for Mason Lake

Fish Habitat

The large woody cover along the shore and the mosaic of emergent, submergent and floating-leaf vegetation provides a diversity of habitat and feeding opportunities for the fish community. This area provides

- 1) Spring spawning sites, spring through fall nursery areas, feeding and cover for northern pike, large-mouth bass, bluegill, pumpkinseed, crappie, bullhead, suckers and yellow perch;
- 2) carp and rusty crayfish are present.

Recommendations

- 1) Maintain the aquatic vegetation in an undisturbed condition for wildlife habitat, fish cover and as a nutrient buffer for water quality protection.
- 2) Protect the emergent vegetation as an erosion buffer.
- 3) Do not remove fallen trees along shoreline.
- 4) Maintain shoreline vegetation, shrubs and snag trees to provide wildlife habitat, prevent erosion and protect water quality.
- 5) Minimize removal of any shoreline or aquatic vegetation.
- 6) Recommend slow no-wake zone in the mouth of Big Spring
- 7) Manage selectively for exotic milfoil and pondweed
- 8) No alteration of littoral zone except for improvement of spawning habitat
- 9) Seasonal protection of spawning habitat
- 10) Create fish refuge area
- 11) No permit approval for pea gravel beds, sand blankets or dredging, except for DNR fishery or wildlife approved projects
- 12) No bank stabilization needed
- 13) No permitting for bank grading
- 14) No permitting for retaining wall
- 15) No pier or boat ramp placement
- 16) No recreational floating devices

Sensitive Area ML3 – West Wetland

This sensitive area extends along 2000 feet of shoreline, averaging 2 feet in depth and supports important shoreline habitat and near-shore terrestrial vegetation (Figure 1). The sediment is sand and silt. The shoreline at this sensitive area extends for about half of its length along a wooded shoreline and half of its length along an emergent wetland. Large woody cover for habitat is present along the wetland, but is common along the wooded stretch.

The area provides visual and sound buffers and an area of beauty for lake residents and visitors.

Additional reasons for site selection:

- 1) the high quality terrestrial plant community
- 2) natural scenic beauty
- 3) the site provides a visual and audible barrier from structures, roads and boat traffic.

The Plant Community:

Marsh fern, reed-canary grass, sedges, bulrush and smartweed colonize the shoreline.

Soft-stem bulrush, bur-reed, water smartweed and cattails emerge from the shallow water.

Duckweeds and watermeal float on the surface.

Common waterweed, coontail, water buttercup, bushy pondweed, water star-grass, northern watermilfoil, long-leaf pondweed, small pondweed and sago pondweed colonize the underwater habitat.

Exotic Eurasian watermilfoil and curly-leaf pondweed are present

Muskgrass and filamentous algae are present.

Water Quality

Maintaining the integrity of this sensitive area is important for protecting the water quality of Mason Lake.

- 1) The submerged and floating-leaf vegetation in this area ties up nutrients in their tissues that would otherwise be available for algae growth.
- 2) The emergent wetland vegetation is filtering water that enters the lake and preventing shoreline erosion.
- 3) The submergent vegetation is protecting the lake bottom.

Fish Habitat

The large woody cover along the shore and the mosaic of emergent, submergent and floating-leaf vegetation provides a diversity of habitat and feeding opportunities for the fish community. This area provides:

- 1) Spring spawning sites, spring through fall nursery areas, feeding and cover for northern pike, large-mouth bass, bluegill, pumpkinseed, crappie, bullhead, suckers and yellow perch;
- 2) carp and rusty crayfish are present.

Recommendations

- 1) Recommend slow no-wake in the shallow west end of Lake Mason
- 2) Maintain the aquatic vegetation in an undisturbed condition for wildlife habitat, fish cover and as a nutrient buffer for water quality protection.
- 3) Protect the emergent vegetation as an erosion buffer
- 4) Do not remove fallen trees along shoreline.
- 5) Maintain shoreline vegetation to provide wildlife habitat, prevent erosion and protect water quality.
- 6) Minimize removal of any emergent shoreline or aquatic vegetation
- 7) Selective control of exotic milfoil and pondweed
- 8) No alteration of littoral zone except for improvement of spawning habitat
- 9) Seasonal protection of spawning habitat
- 10) Create fish refuge area
- 11) No permit approval for pea gravel beds, sand blankets or dredging, except for DNR fishery or wildlife approved projects
- 12) Prohibit drain or filling of wetland
- 13) No bank stabilization needed
- 14) No permitting for bank grading
- 15) No permitting for retaining wall
- 16) Restrict and limit pier placement
- 17) No boat ramp placement
- 18) Limit by permit recreational floating devices

Sensitive Area ML4 – Amey's Pond

This sensitive area is approximately 60-acres, the entire wetland pond south of the highway, averaging 3 feet in depth and supporting important near-shore terrestrial habitat, shoreline habitat and shallow water habitat (Figure 1). The sediment is comprised of silt and organic muck.

The area provides visual and sound buffers and beauty for lake residents and visitors.

Additional reasons for site selection

- 1) the high quality terrestrial plant community;
- 2) its natural scenic beauty
- 3) its value for wildlife habitat
- 4) its value for preserving water quality
- 5) The site provides a visual and audible barrier from structures, roads and boat traffic.

The entire shoreline is an emergent shallow water marsh with deep water marsh habitat in the pond itself.

The Plant Community:

Bur-reed, swamp loosestrife and cattails emerge from the wetland that surrounds the pond.

Yellow pond lilies, duckweeds and watermeal float on the surface.

Coontail, common waterweed, water buttercup, muskgrass, long-leaf pondweed and small pondweed colonize the underwater habitat up to a depth of 7 feet.

Exotic Eurasian watermilfoil and curly-leaf pondweed are present.

Filamentous algae is present.

Water Quality

Maintaining the integrity of this sensitive area is important for protecting the water quality of Mason Lake.

- 1) The emergent and submergent vegetation in this area tie up nutrients in their tissues that would otherwise be available for algae growth.
- 2) The shoreline vegetation is filtering water that enters the lake and protecting the shoreline from erosion.
- 3) The submergent vegetation is protecting the lake bottom from resuspension of the sediments by boat traffic and wind action, thus maintaining clarity.
- 4) The site is a seepage water source for Mason Lake
- 5) The diversity of plant species provide greater micro-habitats the result in greater diversity of aquatic organisms

Fish Habitat

The large woody cover along the shore and the mosaic of emergent, submergent and floating-leaf vegetation provides a diversity of habitat and feeding opportunities for the fish community.

This area provides

- 1) Spring spawning sites, spring through fall nursery areas, feeding and cover for northern pike, large-mouth bass, bluegill, pumpkinseed, crappie, bullhead and yellow perch;
- 2) spring through fall nursery areas, feeding and cover for white suckers
- 3) carp and rusty crayfish are present.

Wildlife Habitat

This area is very important waterfowl habitat.

Recommendations

- 1) Maintain the aquatic vegetation in an undisturbed condition for wildlife habitat, fish cover and as a nutrient buffer for water quality protection.
- 2) Protect the emergent vegetation as an erosion buffer.
- 3) Maintain shoreline vegetation, shrubs and snag trees to provide wildlife habitat, prevent erosion and protect water quality.
- 4) Minimize removal of any shoreline or aquatic vegetation.
- 5) Recommend slow no-wake in Amey Pond.
- 6) No alteration of littoral zone except for improvement of spawning habitat
- 7) Seasonal protection of spawning habitat
- 8) Create fish refuge area
- 9) Place water control structure/carp barrier at the Highway 23 bridge to prevent dewatering of Amey Pond during winter drawdowns on Mason Lake.
- 10) 3102 water level orders
- 11) No permit approval for pea gravel beds, sand blankets or dredging, except for DNR fishery or wildlife approved projects
- 12) Prohibit drain or filling of wetland
- 13) No bank stabilization needed
- 14) No permitting for bank grading
- 15) No permitting for retaining wall
- 16) No pier or boat ramp placement
- 17) No recreational floating devices

Sensitive Area ML5 –Spawning Site

This sensitive area extends along 1000 feet of shoreline and supports important spawning habitat (Figure 1). The sediment is rubble, gravel and sand. The shoreline is 75% developed, 20% wooded and 5% shrub and native herbaceous growth.

The Plant Community:

Scattered cattails emerge from the shallow water.

Coontail, water buttercup, bushy pondweed, northern watermilfoil, muskgrass, sago pondweed and small pondweed colonize the underwater habitat up to a depth of 7 feet.

Exotic Eurasian watermilfoil and curly-leaf pondweed are present.

Filamentous algae is present.

Fish Habitat

- 1) Maintaining the lakebed of the littoral zone in this area is important for panfish spawning in the lake.

Recommendations

- 1) Restore natural shoreline by creating a buffer of shoreline vegetation.
- 2) Use no pesticide or fertilizer yard care along the shore
- 3) No permitting for bank grading that could cause erosion that would cover the spawning beds
- 4) No sand blankets or sediment covers.
- 5) No removal or alteration of lake bed